

REMARKS

Amendments

Claim 1 is amended to recite that the total amount of organic amine derivatives in the composition is at least 75% by weight, based on the total weight of (a) organic amine derivatives, (b) multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, and (c) initiators. See, e.g., page 17, line 30 – page 18, line 5, and the Examples. Claims 10, 11, 19, 38-40, and 45 are amended to insert the basis for the percentages. Claims 15 and 16 are cancelled to eliminate redundancy with claim 10. Claims 28-29 are amended to depend from claim 10, rather than cancelled claim 16. Claim 32 is amended to delete superfluous language. Claims 34 and 36 are amended to correct an obvious typographical error.

New claim 46 is similar to prior claim 1, although it refers to the optional presence of components D-F and uses “consisting of” language. New claim 47 is similar to claim 10, except that it uses “consisting of” language. New claims 48-49 are directed to further aspects of applicants’ invention. See, e.g., page 22, lines 27-31.

Rejection under 35 USC 112, first paragraph: Enablement

Claim 1 is rejected under 35 USC 112, first paragraph, on grounds of alleged lack of enablement. This rejection is respectfully traversed.

As is acknowledged in the Office Action, the Wands factors are used to determine whether undue experimentation is involved. See, *In re Wands*, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). However, **before** the issue of undue experimentation arises, the PTO must present reasons to doubt the veracity of the objective enablement statements presented in an applicants’ specification.

The recent Office Action acknowledges applicants’ arguments, but still fails to present evidence or supporting arguments as to reasons why one would doubt the veracity of the objective enablement statements presented in an applicants’ specification. The rejection merely repeats the arguments regarding alleged undue experimentation.

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The rejection does further argue that breadth is one of the Wands factors, and that these factors can be applied equally. This assertion is made in response to applicants' prior argument that breadth alone is not a determinative factor. Applicants maintain the position that breadth by itself does not establish undue experimentation, let alone non-enablement. In other words, merely because it is asserted that a claimed invention is broad does not definitively establish that undue experimentation is required. Nor does such an assertion, by itself, establish that a claimed invention is non-enabled. An allegedly broad invention can be enabled, even if reasons are provided to doubt the veracity of enablement statements in the specification, if the experimentation involved is routine.

The polymerization art is well developed. One of ordinary skill in the art, using the knowledge within the polymerization art and the guidance provided by applicants' disclosure, can readily make and use the claimed invention with no more than routine experimentation.

It is further asserted in the Office Action that applicants have not provided any "factual arguments" to rebut the rejection. Regardless of whether arguments are characterized as legal or factual, arguments made based on case law can rebut a non-enablement rejection.

The rejection fails to address applicants' arguments based on *In re Marzocchi et al.*, 169 USPQ 367 (CCPA 1971), which are particularly relevant to this rejection since *Marzocchi* also refutes an assertion that "amines" recited in a claim rendered that claim non-enabled.

Regarding the other arguments in the rejection concerning that Wands factors, the rejection asserts that the "claimed invention is an electronic device, which predominately contain melamine-formaldehyde." This is incorrect. The claimed invention is as stated in applicants' claim 1, the only claim rejected for lack of enablement.

The rejection concludes that the scope of claim 1 is broader than that disclosed in the specification. Applicants' disagree. The subject matter of claim 1 is clearly described in the specification. See, e.g., page 7, lines 21-33, page 16, line 22 – page 17, line 33, the Examples, and the original claims

In terms of the state of the art, the rejection cites the Toyoshima et al. reference, asserting that this reference discloses a multilayered wiring board comprising methoxymethylamine, citing paragraph [0099]. Actually, Toyoshima et al. more broadly describe their invention at

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paragraphs [0021]-[0028]. In any event, the allegation that one reference discloses in a specific example a different invention using narrower language does not establish that applicants' claimed subject matter is non-enabled.

With regards to examples, the rejection argues that applicants' examples use only melamine-formaldehyde based amines. Further, it is asserted that "working example is a critical factor", and that the art of film anisotropy with humidity expansion parameter is an unpredictable and undeveloped art. The rejection then cites MPEP 2164.

Applicants' specification clearly provides examples with respect to the preparation of dielectric layers for use in electronic devices. These examples coupled with the further guidance in applicants' specification and the knowledge within the art would clearly enable one of ordinary skill in the art to make and use the claimed invention with no more than routine experimentation. Contrary to the implication in the rejection the art of polymerization and the art of dielectric layers for electronic devices are not "undeveloped" arts. Nor does the rejection support the implication that such arts are unpredictable. See also the case law discussion below regarding enablement even within arts asserted to be unpredictable.

Contrary to the implication in the rejection, MPEP 2164 does not indicate that the presence of working examples is a critical factor. In fact, the first sentence of MPE 2164 states that "Compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed." See also the case law discussion below regarding examples.

As noted previously, in making a lack of enablement rejection, it is the initial burden of the PTO to establish a reason to doubt the truth of the statements presented in the specification concerning enablement. See, e.g., *In re Marzocchi et al.*, 169 USPQ 367, 370 (CCPA 1971). It is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure. In addition, as stated in the *Marzocchi* decision:

"a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be

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taken as in compliance with the enabling requirement of the first paragraph of section 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support” (emphasis in original).

See *In re Marzocchi*, at 369. See also *In re Brana*, 51 F.3d 1560 (Fed. Cir. 1995). Merely asserting a conclusion that the claims are not enabled for “heterocyclic groups” does not set forth reasons or evidence to doubt applicants’ statements of objective enablement.

Thus, all that is required under the statute is objective enablement. In addition, merely because an art is alleged to be unpredictable does not establish non-enablement. See, e.g., *In re Angstadt*, 190 USPQ 214, 219 (CCPA 1976) in which the art involved (catalysis) was acknowledged to be unpredictable, yet the court still found the disclosure in question to be enabling.

Furthermore, asserting that a claim is broad does not provide evidence or reasons to doubt the statements of objective enablement presented in applicants’ specification. The rejection alleges that the terms organic amine derivative, multifunctional polymeric compound and initiator are broader in scope than that disclosed. This is incorrect as these terms are disclosed broadly in applicants’ specification.

The decision in *Marzocchi* is particularly relevant. In *Marzocchi*, the Examiner objected to the term “polyethyleneamine.” The Court noted that the Examiner’s objections indicated a concern over breadth. The Court responded to this concern by stating that:

The only relevant concern of the Patent and Trademark Office under the circumstances should be over the *truth* of the assertion. The first paragraph of §112 requires nothing more than objective enablement. How such a teaching is set forth, either by the use of illustrative examples or by broad terminology, is of no importance. (*Marzocchi* at 369)

Examples to support every possible amine derivative, multifunctional polymeric compound and initiator are not required for enablement. As stated in *Marzocchi*, “How such a [enablement] teaching is set forth, either by the use of illustrative examples or by broad terminology, is of no importance.” See also MPEP § 2164.02 which acknowledges that

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compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed.

With respect to the amount of experimentation, applicants note that it is by now well settled law that the test for enablement is not whether any experimentation is needed, but whether the amount of experimentation required is undue. See *Angstadt*. Even a considerable amount of experimentation, or complex experimentation, is permissible if it is routine. See, e.g., *Ex parte Jackson*, 217 USPQ 804, 807 (POBA 1982) and *In re Wands*, 8 USPQ 2d 1400, 1404 (Fed. Cir. 1988). In the instant case, using the guidance presented in applicants' disclosure, one of ordinary skill in the art can readily test any given embodiment of the claimed invention using no more than routine experimentation.

The rejection fails to set forth reasons as to why one skilled in the art would doubt the veracity of the statements of objective enablement presented in the specification. Further, the rejection fails to present any rationale as to why making and using the invention would require undue experimentation.

In view of the above remarks, it is respectfully submitted that applicants' disclosure provides more than sufficient guidance to objectively enable one of ordinary skill in the art to make and use the claimed invention with no more than routine experimentation. Withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

Rejection under 35 USC 102(b) in view of Toyoshima et al.

Claims 1 and 6 are rejected as allegedly being anticipated in view of Toyoshima et al. (US 2001/0025414). This rejection is again respectfully traversed.

The rejection refers to Example 1 of Toyoshima et al. In this example, a core substrate 3 is obtained by etching a copper foil. Then, a photosensitive insulating layer obtained by cationic polymerization is applied as a first insulating layer 1. The first insulating layer 1 is subjected to UV rays through a mask to obtain a first insulating pattern 11. A second insulating layer is then applied and subjected to heat treatment to diffuse reaction components from the first layer and to provide for a cross linking reaction. The non-cross linked portions are then removed.

As described in paragraph [0099], the second insulating layer is obtained from a second

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insulating layer solution containing 50 g of methoxymethylolmelamine (Cymel 370), 180 g pure water, 100 g of polyvinylacetal resin, and 15 g of butadiene-acrylonitrile copolymer.

In the rejection, it is argued that in this second insulating layer solution of Toyoshima et al. the methoxymethylolmelamine corresponds to applicants' component A and either the polyvinyl alcohol or the butadiene-acrylonitrile copolymer corresponds to component B. It is further asserted that these components make up at least 75% of the total composition.

However, regardless of whether the polyvinyl alcohol or the butadiene-acrylonitrile copolymer is asserted to correspond to applicants' component B, Example 1 of Toyoshima et al. does not anticipate applicants' claim 1. Referring to Example 1 of Toyoshima et al., the total amount of organic amine derivatives in the mixture constituting the second insulating layer is 50g (i.e., the amount of methoxymethylolmelamine). The total amount multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, in the mixture constituting the second insulating layer is, based on the Examiner's interpretation, 115g (i.e., 100 g of polyvinylacetal resin, and 15 g of butadiene-acrylonitrile copolymer). Thus, the composition contains 43.5% of organic amine derivatives, based on the total weight of (a) organic amine derivatives, (b) multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, and (c) initiators. Compare applicants' claim 1.

Thus, Toyoshima et al. fail to anticipate applicants' claimed invention under 35 USC 102(b). Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 103(a) in view of Toyoshima et al. or Knudsen et al. in view of Chen et al.

Claims 2-5, 7-17, 21-30, 33, 38-45 are rejected as allegedly being obvious in view of Toyoshima et al. (US 2001/0025414) or Knudsen et al. (US 2002/0176989) in combination with Chen et al. (US 5,330,840). This rejection is respectfully traversed.

In this rejection, the Examiner again refers to Example 1 of Toyoshima et al. As explained above, Toyoshima et al. does not describe a dielectric layer formed from a composition comprising applicants' components A, B, and optionally C, wherein the composition contains at

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least 75% by weight of organic amine derivatives, based on the total weight of (a) organic amine derivatives, (b) multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, and (c) initiators. Nor does Toyoshima et al. suggest such a composition for forming a dielectric layer.

In the rejection, it is asserted that Knudsen et al. disclose the use of cross-linked polyurethane material as a dielectric layer, citing the abstract, paragraph [0031], paragraph [0051], and paragraph [0019]. The abstract of Knudsen et al. describes a dielectric that is composed of a core material positioned between two polymer layers and can be used in a capacitor. These polymer layers are said to “provide structural integrity for the dielectric.” Paragraph [0031] refers to a “dielectric laminate” being placed on a substrate. The dielectric laminates are described in paragraph [0028] as having a core dielectric material between two dielectric polymer layers. Paragraph [0049] describes suitable material for the core dielectric material, e.g., “carbon compounds such as diamond, and ceramic materials such as silicon carbide, silica and silica based compositions, including 100% silica layers, amorphous and crystalline, but also doped silica and silica mixed with other oxides.”

In paragraph [0051], Knudsen et al. refer to an extremely wide variety of polymeric materials that can be used in the dielectric laminate. Thus, Knudsen et al. disclose that the polymer materials can be:

“polyesters, polystyrene, high impact polystyrene, styrene-butadiene copolymers, impact modified styrene-butadiene copolymer, poly- α -methyl styrene, styrene acrylonitrile copolymers, acrylonitrile butadiene copolymers, polyisobutylene, polyvinyl chloride, polyvinylidene chloride, polyvinyl acetals, polyacrylonitrile, alky polyacrylates, alky polymethacrylates, polybutadiene, ethylene vinyl acetate, polyamides, polyimides, polyoxymethylene, polysulfones, polyphenylene sulfide, polyvinyl esters, melamines, vinyl esters, epoxies, polycarbonates, polyurethanes, polyether sulfones, polyacetals, phenolics, polyester carbonate, polyethers, polyethylene terephthalate, polybutylene terephthalate, polyarylates, polyarylene ethers, polyarylene sulfides, polyether ketones, polyethylene, high density polyethylene, polypropylene, and copolymers, grafts, blends, and mixtures

thereof.”

It is evident that this is a vast grouping of polymers. It is noted that polyurethanes are included within this extremely broad genus. Yet, the rejection presents no rationale as to why one of ordinary skill in the art would select polyurethanes from this extremely broad genus encompassing a seemingly infinite number of species. More importantly, polysiloxanes are not included with this vast group of polymers. Polysiloxanes will be further discussed below with regards to the disclosure of Chen et al.

In the recent Office Action, it is alleged that it would be obvious that any of the polymers of Knudsen et al. could be used. However, when it comes to the teaching of a broad genus of chemical compounds and what is fairly rendered obvious by such a disclosure, the law is well established by such Federal Circuit decisions as *In re Jones*, 21 USPQ2d 1941, 1943, (Fed. Cir. 1992) and *In re Baird*, 29 USPQ2d 1550 (Fed. Cir. 1994).

When analyzing whether disclosure of a broad genus of chemical compounds will render obvious certain species thereof, one must look to the specific species described by the prior art reference to determine if they suggest the claimed subject matter. See, for example, the Court’s decision in *In re Baird*, 29 USPQ2d 1550 (Fed. Cir. 1994). In *Baird*, the Court noted that a prior art genus of diphenol compounds for use in developer compositions encompassed bisphenol A, which was used as part of a claimed toner composition. However, the Court held that this generic disclosure did not render obvious the particular claimed embodiment, after comparing the structure of bisphenol A with the structures of the specifically disclosed diphenols in the prior art reference.

See also, e.g., *In re Jones*, 21 USPQ2d 1941, 1943, (Fed. Cir. 1992) wherein the Court in reversing the Board’s decision of *prima facie* obviousness, disputed the Board’s reliance on the Court’s prior decision, *Merck & Co. v. Biocraft Labs, Inc.*, 10 USPQ2d (Fed. Cir. 1989):

We **decline** to extract from *Merck* the rule that the Solicitor appears to suggest -- that regardless of how broad, a disclosure of a chemical genus renders obvious any species that happens to fall within it. In contrast, though Richter [the prior art relied on] discloses the potentially infinite genus of ‘substituted ammonium salts’ of dicamba, and lists several such salts, the claimed salt here is not specifically disclosed. Nor, as we have explained above, is the claimed salt

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sufficiently similar in structure to those specifically disclosed in Richter as to render it *prima facie* obvious (emphasis added).

Thus, the analysis used by the Court in *Jones* to determine whether obviousness was established by the prior art was to compare the claimed salt with those salts specifically disclosed by the prior art reference. The rejection presents no similar analysis with respect to the extremely broad genus described by Knudsen et al.

In the rejection, it is asserted that paragraph [0019] of Knudsen et al. discloses that the polyurethane base materials can contain ceramics. This is not an accurate description of the disclosure of paragraph [0019]. This paragraph, which relates to the prior art, discloses that dielectric materials include ceramic materials such as metal oxides that can be deposited on a substrate by CCVD or by CACCVD. Thus, contrary to the assertion in the rejection, Knudsen et al. do not disclose that the polyurethane base materials can contain ceramics.

In the rejection, Knudsen et al. is relied on as a primary reference. Yet, the rejection fails to set forth where Knudsen et al. disclose any of the features of the composition recited in applicants' claims. Thus, for example, it is unclear which components of the composition disclosed by Knudsen et al. are asserted to correspond to component A, component B, and optional component C, of applicants' composition. Further, the rejection does not demonstrate how Knudsen et al. disclose a composition that contains at least 75% by weight of organic amine derivatives, based on the total weight of (a) organic amine derivatives, (b) multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, and (c) initiators. Thus, it is unclear how the disclosure of Knudsen et al. is being utilized in the rejection.

In the rejection, it is stated that neither Toyoshima et al. nor Knudsen et al. disclose the amine crosslinking agents recited in applicants' claim 2. But, in addition, Toyoshima et al. and Knudsen et al. also fail to disclose or suggest a composition that contains at least 75% by weight of organic amine derivatives, based on the total weight of (a) organic amine derivatives, (b) multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, and (c) initiators.

Chen et al. disclose a melamine-cured polyurethane coating composition described as

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being useful for manufacturing toner fusing members. The polyurethane is the polycondensation product of a C₂₋₂₀ diol, a monomeric diisocyanate, and an organopolysiloxane diol having a siloxane backbone, pendant alkyl, vinyl, and/or phenyl groups, and terminal hydroxyalkylene groups. See the disclosure at column 3, lines 4-21.

The coating composition comprises a crosslinked block copolymer product of the polyurethane block copolymer and the melamine resin. As noted in the rejection, Chen et al. disclose that the melamine resins, Cymel-303, Cymel-380, and Cymel-385, can be used as crosslinking agents. The reactive sites on the polyurethane block copolymer for reacting with the melamine crosslinking agents are “predominately hydroxyl groups located on the endcapping diol units.” See column 5, lines 61-64 and column 6, lines 59-63.

Curing of the coating composition is achieved through the use of an acid catalyst such as trifluoroacetic acid. The acid catalyst is used in an amount of 0.001%-1.0% of the solids in the formulation. See column 7, lines 1-6.

Chen et al. disclose forming a coating solution for use in applying the coating composition to a substrate, i.e., a fusing belt. The coating solution contains a solvent like THF, the polyurethane/polysiloxane block copolymer, the melamine resin, and a catalyst for reacting the terminal diol groups of the polyurethane/polysiloxane block copolymer with the reactive sites of the melamine resin. See column 6, lines 55-63.

As noted above, the coating composition contains a melamine resin and a polyurethane/polysiloxane block copolymer that is reacted with the melamine resin. The polyurethane/polysiloxane block copolymer contains a significant amount of siloxane units, due to the use of an organopolysiloxane diol in the manufacture of the block copolymer. As a result of this significant amount siloxane, one skilled in the art would not characterize the block copolymer as a multifunctional organic compound. Compare applicants’ component B as recited in claims 1 and 10.

In the recent Office Action, it is argued that a polydimethylsiloxane can be considered a multifunctional organic compound since it has multiple functional groups. However, as applicants argued above, due to the significant amount siloxane, one skilled in the art would not characterize the block copolymer of Chen et al. as a multifunctional organic compound.

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Furthermore, it is unclear what “multiple functional groups” the Examiner is referring to with respect to polydimethylsiloxane.

The coating composition of Chen et al. thus does not suggest a composition containing components A and B as recited in applicants’ claims. Further, since the polyurethane/polysiloxane block copolymer of Chen et al. is not a multifunctional organic compound, Chen et al. do not suggest a composition that contains at least 75% by weight organic amine derivatives, based on the total weight of (a) organic amine derivatives, (b) multifunctional organic compounds with at least two functional groups selected from -OH, -NH₂, -COOH, and their reactive derivatives, and (c) initiators.

It is noted that Chen et al. broadly disclose that the amount of melamine resin can be 2-80 wt. %. However, the disclosure clearly suggests using amounts that are much lower than 80 wt. %. For example, 10-40 wt. % is preferred (column 6, lines 6-9). See also the disclosure at column 6, lines 63-67 regarding relative amounts of the polyurethane/polysiloxane block copolymer and the melamine resin. See also the relative amounts of polyurethane/polysiloxane block copolymer and the melamine resin used in Examples 8-9. Additionally, Chen et al. provide no suggestion as to the amount of melamine resins to be used in completely different applications, such as the inventions of Toyoshima et al. and Knudsen et al.

Moreover, the rejection fails to explain why one would modify the devices of the primary reference in light of the disclosure of Chen et al. For example, Chen et al. do not disclose an electronic device comprising at least one dielectric layer formed from the coating composition described by Chen et al. In fact, Chen et al. provide no disclosure regarding the dielectric properties of layers formed from the coating composition, e.g., there is no disclosure of the dielectric constant or resistivity of layers formed from the coating composition.

In the rejection asserts that it would be obvious to use the coating composition of Chen et al. in the dielectric laminate of Knudsen et al. or the wiring board of Toyoshima et al. The rationale for this modification is that the composition of Chen et al. has “excellent flexibility, adhesion to a metal surface and low dielectric constant.” **However, Chen et al. make no mention of the dielectric properties of their coating composition.**

In the recent Office Action, it is asserted that Chen et al. composition has essentially the

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same base material as applicants' composition. However, this rationale for using the Chen et al. composition in the dielectric laminate of Knudsen et al. or the wiring board of Toyoshima et al. relies on improper hindsight and impermissible use of applicants' disclosure. Even if one skilled in the art would look to the toner fusing member art to modify the devices of Knudsen et al. and Toyoshima et al., with respect to the composition of Chen et al. one would find no description of dielectric properties. Further, if one were to consider the compositions of Chen et al., one would look first to the compositions of the examples. Such consideration would provide no suggestion as to the dielectric constant of applicants' composition and no expectation that applicants' composition would have the same dielectric constant as the compositions exemplified by Chen et al.

There is no reason presented in the rejection why one of ordinary skill in the art would replace one or both of the polymer layers of the dielectric laminate Knudsen et al. with the coating composition of Chen et al. As noted, Chen et al. make no mention of the dielectric properties of their coating composition.

Similarly, no explanation is provided in the rejection as to why one of ordinary skill in the art would modify the wiring board of Toyoshima et al. so as to use the coating composition of Chen et al. The second insulating layer of Toyoshima et al. is one that is cross-linked and then "developed" so as to remove the uncross-linked regions. There is nothing in the rejection that explains why such an insulating layer should be replaced by the coating composition of Chen et al.

In addition, the rejection presents no rationale as to why one of ordinary skill in the art would look to art dealing with the manufacture of fusing members in electrophotographic copying processes in order to modify the manufacture of dielectric materials for use in electronic components such as capacitors or to modify the manufacture of wiring boards. In addition, in view of the extremely large class of polymeric materials described by Knudsen et al., no rationale is presented in the rejection as to why one of ordinary skill in the art would go to a material outside of this vast genus, namely a polyurethane/polysiloxane copolymer, for selecting a material for use in the dielectric laminate, especially when the reference disclosing the polyurethane/polysiloxane makes no mention of its dielectric properties. Similarly, there is no

suggestion in any of the prior art of using a polyurethane/polysiloxane copolymer for the insulating layer of Toyoshima et al.

The rejection also asserts that Chen et al. disclose the use of 1,4-butanediol. It is correct that 1,4-butanediol is listed in the Table as the short-chain diol of Examples 3 and 4. However, this diol is used in the manufacture of the polyurethane/polysiloxane block copolymer. It is not utilized as an agent capable of cross-linking with the melamine resin. As discussed above, it is the polyurethane/polysiloxane block copolymer (not a starting material thereof) that undergoes cross-linking with the melamine resin. Compare applicants' claims 29 and 40.

In the recent Office Action, it is asserted that 1,4-butanediol is used in excess and thus would be expected to be present. No explanation is provided in support of this assertion. In Example 2 of Chen et al., 20 g of polymeric silicone diol is reacted with 2,2-dimethyl-1,3-propane diol (3.42 g), tin octanoate (0.5 g), and methylene bis(4-cyclohexyl isocyanate) (11 g) was added dropwise from an addition funnel during 2 hours. The desired polyurethane is obtained after washing and drying in a vacuum oven overnight. In light of such a procedure, the rejection does not demonstrate why one skilled in the art would expect 2,2-dimethyl-1,3-propane diol (or 1,4-butanediol) to be present.

In view of the above remarks, it is respectfully submitted that Toyoshima et al. and/or Knudsen et al., taken alone or in combination with Chen et al., fail to render obvious applicants' claimed invention. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 103(a) in view of Toyoshima et al. or Knudsen et al. in view of Chen et al. and Barancyk et al.

Claims 31-37 are rejected as allegedly being obvious in view of Toyoshima et al. (US 2001/0025414) or Knudsen et al. (US 2002/0176989) in combination with Chen et al. (US 5,330,840) and Barancyk et al. (US 2004/0044165). This rejection is also respectfully traversed.

The disclosures of Toyoshima et al., Knudsen et al., and Chen et al. are discussed above. Barancyk et al. is relied on in the rejection for disclosure of para-toluene sulphonic acid as a catalyst, butanol and ketones as solvents, and polyoxyethylene as a surfactant.

However, the disclosure of Barancyk et al. does not overcome the discrepancies discussed

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above with respect to the combination of Toyoshima et al. or Knudsen et al. with Chen et al.
Withdrawal of the rejection is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response
or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

/Brion P. Heaney/
Brion P. Heaney, Reg. No. 32,542
Attorney for Applicant(s)

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410

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